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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)
23990-08225

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Application Number	Filed
10/666,209	September 17, 2003

First Named Inventor
Peter B. Evans

Art Unit	Examiner
2128	Suzanne Lo

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☑ attorney or agent of record.
Registration number 57,219.

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____

/Brian G. Brannon/
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September 22, 2008
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☑ *Total of 1 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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REMARKS FOR PRE-APPEAL BRIEF REQUEST FOR REVIEW IN U.S. PATENT APPLICATION NO. 10/666,209 FILED ON SEPTEMBER 17, 2003

Pre-appeal brief review is appropriate in this application because the rejections in the Final Office Action dated May 21, 2008 contain clear deficiencies. The rejections of claims 1-14, 19 and 20 should be withdrawn. As set forth below, because the cited references fail to include any teaching or suggestion of essential claim elements these rejections omit essential elements needed for a *prima facie* rejection.

REJECTION OF CLAIMS 1-14, 19 AND 20 UNDER 35 USC § 102(a)

Claims 1-14, 19 and 20 have been rejected under 35 USC § 102(a) as anticipated by "Operations Review of June 14, 2000 PG&E Bay Area System Events Using Aempfast Software" (hereinafter "Optimal Technologies").

Claims 1, 2, 10 and 19 variously recite "generating a single mathematical model by integrating the model of the transmission-level buses with the model of the distribution-level buses, wherein the single mathematical model further models the interdependency of the plurality of transmission lines and the plurality of transmission electrical elements included in the model of the transmission level buses and the plurality of distribution lines and the plurality of distribution electrical elements included in the model of the distribution-level buses." (emphasis added). Optimal Technologies clearly does not disclose these aspects of the claimed invention.

These aspects of the claimed invention promote comprehensive assessment of the effects of an electric power network by integrating distribution elements with transmission elements in a single mathematical model and by into a single mathematical model accounting for the interdependency of a plurality of transmission lines and a plurality of transmission electrical elements with a plurality of distribution lines and a plurality of distribution

electrical elements. These aspects of the claimed invention permit greater detail and direct inclusion of interdependencies between transmission-level effects from transmission lines and transmission electrical elements and distribution-level effects from distribution lines and distribution electrical elements in energy network analysis using an integrated model of transmission-level buses and distribution-level buses, improving the accuracy of the evaluation. Conventionally, separate models are used to simulate distribution and transmission, preventing inclusion of relationships between transmission elements and distribution elements in conventional power network analysis.

Optimal Technologies does not disclose integrating a model of the transmission-level buses with a model of the distribution-level buses, and makes no disclosure of generating the model used to analyze the power network. Rather, Optimal Technologies merely discloses reformatting a received data file, partitioning the data file (reducing the scope and size of the data set) to identify a subset for analysis and analyzing the partitioned subset using conventional load flow analysis. (page 15, §4.1.1, ¶ 2-6; page 18, § 5.1, ¶1; §5.1.2). Hence, Optimal Technologies merely reformats and partitions a received data file describing a power network and does not disclose "integrating the model of the transmission-level buses with the model of the distribution-level buses" to generate a "single mathematical model," as claimed. Rather, Optimal Technologies simulates the power network described by the data file using load flow analysis.

In describing analysis of an example electric power network, Optimal Technologies initially receives a Cal ISO data file and subsequently reformats and partitions the data file to identify a subset for analysis using conventional load flow analysis (page 18, §§ 5.1-5.1.2; page 19, §§6.1-6.1.2; page 19, table 3). The reformatting merely converts the data file from a

first format to a second format (in the example provided, the data file is converted from a GE PSLF EPC data file format to a CWF file format). Similarly, the disclosed partitioning merely identifies a subset of the data file for further analysis (in the example provided, the PG&E subsystem is extracted from the WECC system described by the data file) (pages 16-17, § 4.2.2, 4.2.2.2). Table 4 in Optimal Technologies shows that, after partitioning the data file, no distribution electrical elements are added to, other modification made to, the original data, as would be necessary to integrate both transmission and distribution models of the power network (page 20, § 6.2; Table 4).

Hence, the content of the externally received data file in Optimal Technologies specifies the model used by Optimal Technologies for power network simulation. In contrast, the claimed invention integrates "the model of the transmission-level buses with the model of the distribution-level buses," to generate a "single mathematical model" for electric power network simulation. Optimal Technologies does not integrate disparate models to generate the model used for analysis, but merely uses the contents of the received data file to model the power network.

In the Final Office Action, the Examiner cites additional references to justify the Examiner's interpretation of Optimal Technologies. Even in view of these additional references, Optimal Technologies cannot be interpreted to disclose "generating a single mathematical model by integrating the model of the transmission-level buses with the model of the distribution-level buses, wherein the single mathematical model further models the interdependency of the plurality of transmission lines and the plurality of transmission electrical elements included in the model of the transmission level buses and the plurality of distribution lines and the plurality of distribution electrical elements included in the model of

the distribution-level buses," as claimed. These additional references cited by the Examiner merely list possible benefits or features of the software described in Optimal Technologies ("Aempfast"). Nothing in these additional references discloses or suggests that Optimal Technologies discloses generating the model which simulates the power network.

The Teresko article referenced by the Examiner merely indicates that Aempfast is able to view various network component contributions in real-time. However, this real-time component monitoring does not disclose or suggest that Aempfast integrates "the model of the transmission-level buses with the model of the distribution-level buses" to generate "a single mathematical model," but provides that Aempfast may rapidly process received data. This allusion to Aempfast's data analysis speed does not disclose or suggest that Aempfast generates "a single mathematical model by integrating the model of the transmission-level buses with the model of the distribution-level buses," as claimed.

Similarly, the BusinessWire article referenced by the Examiner merely provides a list of data analysis types Aempfast may perform. However, this merely describes possible benefits of analyzing power network data with Aempfast, such as "real-time emergency response analysis" and "advanced emergency response and contingency planning for local, regional and national power grids." However, the BusinessWire article fails to disclose or suggest how Aempfast models the power network to provide these benefits. Merely listing potential benefits does not disclose or suggest that Aempfast integrates "the model of the transmission-level buses with the model of the distribution-level buses," as claimed.

The alleged benefits of Aempfast described by Optimal Technologies and mentioned by the additional references do not disclose "integrating the model of the transmission-level buses with the model of the distribution-level buses, wherein the single mathematical model

further models the interdependency of the plurality of transmission lines and the plurality of transmission electrical elements included in the model of the transmission level buses and the plurality of distribution lines and the plurality of distribution electrical elements included in the model of the distribution-level buses," as claimed. Each reference merely lists benefits or features of Aempfast without indicating that Optimal Technologies discloses generating the model used for analysis. The possible benefits referenced by Optimal Technologies, the Teresko article and the BusinessWire article are achieved by reformatting and partitioning a received data file to identify a subset of data for analysis and performing load flow analysis on the subset of data, as disclosed by Optimal Technologies. (page 15, § 4.1.1, ¶¶ 2-6).

Thus, Optimal Technologies fails to disclose the claimed element of "integrating the model of the transmission-level buses with the model of the distribution-level buses, wherein the single mathematical model further models the interdependency of the plurality of transmission lines and the plurality of transmission electrical elements included in the model of the transmission level buses and the plurality of distribution lines and the plurality of distribution electrical elements included in the model of the distribution-level buses." Hence, each of the pending rejections suffers from a clear deficiency so Applicants request withdrawal of the rejections of claims 1-14, 19 and 20.

Respectfully Submitted,
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